

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: ROLFE C. ANDERSON et al. Examiner: W. Beisner
Serial No: 09/751,658 Art Unit: 1744
Filed: December 31, 2000
For: INTEGRATED NUCLEIC ACID DIAGNOSTIC DEVICE

COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

PROPOSED CLAIMS AMENDMENTS

90. (Three Times Amended) A method of repeatedly measuring a known volume of a fluid in a miniature fluidic system, comprising:

providing a microfabricated device having at least first and second chambers connected by at least one common channel disposed therein, wherein said at least first and second chambers are in fluid connection, each comprise at least one vent port, and wherein at least one of said chambers is a volumetric chamber having a known volume;

providing a diaphragm valve constructed and arranged to create a pressure differential for displacing fluid;

filling completely said volumetric chamber with said fluid using a pressure differential to create a first aliquot of said fluid;

transporting said first aliquot of said fluid to said at least second chamber using a pressure differential; and

repeating said filling and transporting steps by applying said pressure differential from an external source.

92. (Twice Amended) A method of measuring and processing a known volume of a fluid in a miniature fluidic system for integrated nucleic acid analysis, comprising the acts of:

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providing a microfabricated device having at least first and second chambers each including a fluid port in communication with a common channel [disposed therein], said at least first and second chambers including at least one vent port and at least one of said chambers being a volumetric chamber having a known volume;

providing a sealable closure inlet to said microfabricated device constructed and arranged to introduce fluid to be delivered to said chambers;

providing at least one valve controlled by an external pressure source;

filling said volumetric chamber with said fluid to create a first aliquot of said fluid;

opening said controllable valve; and

transporting said first aliquot of said fluid to said at least second chamber by applying a pressure differential from said external source.

117. (Twice Amended) A miniature fluidic system for measuring and processing a known volume of a fluid controlled by an external pressure source, comprising:

a microfabricated device having at least first and second chambers, each including a fluid port in communication with at least one controllable valve [disposed therein], said at least first and second chambers including at least one vent port and at least one of said chambers being a volumetric chamber having a known volume;

a sealable closure inlet to said microfabricated device constructed to enable introduction of a liquid to be delivered to said chambers;

said at least one valve controlled by an external pressure source;

means for filling said volumetric chamber with said fluid to create a first aliquot of said fluid;

means for opening said controllable valve; and

means for transporting said first aliquot of said fluid to said at least second chamber using a pressure differential.

Unofficial

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RE:
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*Pursuant to your facsimile, I am enclosing
proposed claim amendments. Ivan Zitkovsky*

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that the enclosed total of 3 pages including a cover sheet is being facsimile transmitted to the fax number shown above, in the above-referenced application, to the Patent and Trademark Office on the date shown below.

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Signing Certification

Ivan Zitkovsky

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